IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:	
DAVID V. JAMES and WILLIAM RIVARD	Examiner: **UNKNOWN**
Serial No.: **NOT YET ASSIGNED**	Group Art Unit: **UNKNOWN**
Filed: **ON EVEN DATE HEREWITH**	
For: **APPARATUS AND METHOD FOR INTER-NODE COMMUNICATION**	
A DIVISION OF	
Serial No.: **09/040,149**	
Filed: **MARCH 17, 1998**	

PRELIMINARY AMENDMENT

Box Patent Application
Hon. Commissioner for Patents
Washington, D. C. 20231

Dear Sir:

Applicant respectfully requests entry of the following amendments and consideration of the following remarks. Please charge any fees necessary for prosecution of the present application to deposit account no. 50-1443.

CERTIFICATE OF MAILING
37 C.F.R. 1.10

I hereby certify that this correspondence is being deposited with the United States Postal Service as Express Mail No. EK889946752US in an envelope addressed to: BOX PATENT APPLICATION, Commissioner of Patents, Washington, D.C. 20231, on December 31, 2001.

Nancy R. Simon

Signature

IN THE CLAIMS

Please replace claims 3-7 and 11-13 with the following rewritten claims:

3. (Amended Once) The method of claim 6 wherein the step of transforming each group of unencoded signals into a group of encoded signals comprises the step of transforming a group of unencoded signals into a group of encoded signals having an equal number of logic 1's and logic 0's using one of the selected at least one encoding scheme.

4. (Amended Once) The method of claim 7 wherein the step of transforming each group of unencoded signals into a group of encoded signals comprises the step of transforming a group of six unencoded signals into a group of eight encoded signals.

5. (Amended Once) The method of claim 7 wherein the step of transforming each group of unencoded signals into a group of encoded signals comprises the step of transforming a group of four unencoded signals into a group of six encoded signals.

6. (Amended Once) The method of claim 1 further comprising the step of selecting at least one encoding scheme prior to performing the step of transforming each group of unencoded signals into a group of encoded signals.

7. (Amended Once) The method of claim 6 wherein the at least one encoding scheme transforms a group of unencoded signals to encoded signals such that a difference between a total number of unencoded data values and a total number of encoded data values is a predetermined fraction of the total number of unencoded data values.

11. (Amended Once) The method of claim 12 wherein the step of transforming each group of unencoded signals into a group of encoded signals comprises the step

of transforming a group of unencoded signals into a group of encoded signals having a constant number of logic 1's and logic 0's using one of the selected at least one encoding scheme.

12. (Amended Once) The method of claim 9 further comprising the step of selecting at least one encoding scheme prior to performing the step of transforming each group of unencoded signals into a group of encoded signals.

13. (Amended Once) The method of claim 12 wherein the at least one encoding scheme transforms a group of unencoded signals to encoded signals such that a difference between a total number of unencoded data values and a total number of encoded data values is a predetermined fraction of the total number of unencoded data values.

Please add the following new claims 15-34.

15. (New) An apparatus for inter-node communication, comprising:

means for dividing a plurality of unencoded signals into groups at a first node, wherein each group has a number of unencoded signals;

means for transforming each group of unencoded signals into a group of encoded signals, wherein each group of encoded signals has nearly an equal number of logic 1's and logic 0's; and

means for transmitting the groups of encoded signals to a second node, whereby the groups of encoded signals are transmitted with minimal current fluctuations.

16. (New) The apparatus of claim 15 further comprising means for selecting at least one encoding scheme prior to transforming each group of unencoded signals into a group of encoded signals.

17. (New) The apparatus of claim 16 wherein the at least one encoding scheme transforms a group of unencoded signals to encoded signals such that a difference between a total number of unencoded data values and a total number of encoded data values is a predetermined fraction of the total number of unencoded data values.

18. (New) The apparatus of claim 16 wherein the means for transforming each group of unencoded signals into a group of encoded signals comprises means for transforming a group of unencoded signals into a group of encoded signals having an equal number of logic 1's and logic 0's using one of the selected at least one encoding scheme.

19. (New) The apparatus of claim 17 wherein the means for transforming each group of unencoded signals into a group of encoded signals comprises means for transforming a group of six unencoded signals into a group of eight encoded signals.

20. (New) The apparatus of claim 17 wherein the means for transforming each group of unencoded signals into a group of encoded signals comprises means for transforming a group of four unencoded signals into a group of six encoded signals.

21. (New) The apparatus of claim 15 further comprising means for transforming the groups of encoded signals received by the second node back into the plurality of unencoded signals.

22. (New) An apparatus for inter-node communication, comprising:

means for dividing a plurality of unencoded signals into groups at a first node, wherein each group has a number of unencoded signals;

means for transforming each group of unencoded signals into a group of encoded signals, wherein each group of encoded signals has nearly a constant number of logic 1's and logic 0's; and

means for transmitting the groups of encoded signals to a second node, whereby the groups of encoded signals are transmitted with minimal current fluctuations.

23. (New) The apparatus of claim 22 further comprising means for selecting at least one encoding scheme prior to transforming each group of unencoded signals into a group of encoded signals.

24. (New) The apparatus of claim 23 wherein the at least one encoding scheme transforms a group of unencoded signals to encoded signals such that a difference between a total number of unencoded data values and a total number of encoded data values is a predetermined fraction of the total number of unencoded data values.

25. (New) The apparatus of claim 23 wherein the means for transforming each group of unencoded signals into a group of encoded signals comprises means for transforming a group of unencoded signals into a group of encoded signals having a constant number of logic 1's and logic 0's using one of the selected at least one encoding scheme.

26. (New) The apparatus of claim 22 further comprising means for transforming the groups of encoded signals received by the second node back into the plurality of unencoded signals.

27. (New) A computer-useable medium including computer program code for causing a computer to effect inter-node communication by performing the steps of:

dividing a plurality of unencoded signals into groups at a first node, wherein each group has a number of unencoded signals;

transforming each group of unencoded signals into a group of encoded signals, wherein each group of encoded signals has nearly an equal number of logic 1's and logic 0's; and

transmitting the groups of encoded signals to a second node, whereby the groups of encoded signals are transmitted with minimal current fluctuations.

28. (New) The computer-useable medium of claim 27 further comprising computer program code for causing a computer to effect inter-node communication by performing the step of selecting at least one encoding scheme prior to transforming each group of unencoded signals into a group of encoded signals.

29. (New) The computer-useable medium of claim 28 wherein the step of transforming each group of unencoded signals into a group of encoded signals comprises the step of transforming a group of unencoded signals into a group of encoded signals having an equal number of logic 1's and logic 0's using one of the selected at least one encoding scheme.

30. (New) The computer-useable medium of claim 27 further comprising computer program code for causing a computer to effect inter-node communication by performing the step of transforming the groups of encoded signals received by the second node back into the plurality of unencoded signals.

31. (New) A computer-useable medium including computer program code for causing a computer to effect inter-node communication by performing the steps of:

dividing a plurality of unencoded signals into groups at a first node, wherein each group has a number of unencoded signals;

transforming each group of unencoded signals into a group of encoded signals, wherein each group of encoded signals has nearly a constant number of logic 1's and logic 0's; and

transmitting the groups of encoded signals to a second node, whereby the groups of encoded signals are transmitted with minimal current fluctuations.

32. (New) The computer-useable medium of claim 31 further comprising computer program code for causing a computer to effect inter-node communication by performing the step of selecting at least one encoding scheme prior to transforming each group of unencoded signals into a group of encoded signals.

33. (New) The computer-useable medium of claim 32 wherein the step of transforming each group of unencoded signals into a group of encoded signals comprises the step of transforming a group of unencoded signals into a group of encoded signals having a constant number of logic 1's and logic 0's using one of the selected at least one encoding scheme.

34. (New) The computer-useable medium of claim 31 further comprising computer program code for causing a computer to effect inter-node communication by performing the step of transforming the groups of encoded signals received by the second node back into the plurality of unencoded signals.

REMARKS

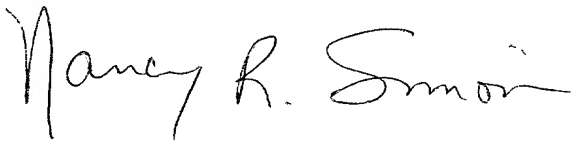
Claims 3-7 and 11-13 have been amended. Claims 15-34 have been added. No new matter has been added to the application as a result of these amendments. Claims 1-34 are currently pending in the application.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "Version with markings to show changes made."

Applicant respectfully submits this Preliminary Amendment for the Examiner's consideration prior to the examination of the above-referenced matter.

Respectfully submitted,

Date: December 31, 2001



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VERSION WITH MARKINGS TO SHOW CHANGES MADE

Claims 3-7 and 11-13 have been amended as follows:

3. (Amended Once) The method of claim [1] 6 wherein the [transforming step includes the] step of transforming [the groups] each group of unencoded signals into [groups] a group of encoded signals comprises the step of transforming a group of unencoded signals into a group of encoded signals having an equal number of logic 1's and logic 0's using one of the selected at least one encoding scheme.

4. (Amended Once) The method of claim [1] 7 wherein the step of transforming each group of unencoded signals into a group of encoded signals comprises the step of transforming a group of six unencoded signals into a group of eight encoded signals.

5. (Amended Once) The method of claim [1] 7 wherein the step of transforming each group of unencoded signals into a group of encoded signals comprises the step of transforming a group of four unencoded signals into a group of six encoded signals.

6. (Amended Once) The method of claim 1 further comprising the step of selecting [an] at least one encoding scheme prior to performing the step of [dividing a plurality of unencoded signals into groups] transforming each group of unencoded signals into a group of encoded signals.

7. (Amended Once) The method of claim 6 wherein the at least one encoding scheme transforms a group of unencoded signals to encoded signals such that a difference between a total number of unencoded data values and a total number of encoded data values is a predetermined fraction of the total number of unencoded data values.

11. (Amended Once) The method of claim [9] 12 wherein the [transforming step includes the] step of transforming [the groups] each group of unencoded signals into a group [groups] of encoded signals comprises the step of transforming a group of unencoded signals into a group of encoded signals having a constant number of logic 1's and logic 0's using one of the selected at least one encoding scheme.

12. (Amended Once) The method of claim 9 further comprising the step of selecting [an] at least one encoding scheme prior to performing the step of [dividing a plurality of unencoded signals into groups] transforming each group of unencoded signals into a group of encoded signals.

13. (Amended Once) The method of claim 12 wherein the at least one encoding scheme transforms a group of unencoded signals to encoded signals such that a difference between a total number of unencoded data values and a total number of encoded data values is a predetermined fraction of the total number of unencoded data values.

New claims 15-34 have been added.